

Abstract**Active pixels with improved charge transfer**

- An active pixel is described comprising a semiconductor substrate and
- 5 a radiation sensitive source of carriers in the substrate, such as for instance, a photodiode. A non-carrier storing, carrier collecting region in the substrate is provided for attracting carriers from the source as they are generated. At least one doped or inverted region of a first conductivity is provided in or on the substrate for storing the carriers before read-out. At least one non-carrier storing, planar current
- 10 flow, carrier transport pathway is provided from or through the carrier collecting region to the at least one doped or inverted region to transfer the carriers without intermediate storage to the read-out electronics.